



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,235	11/21/2003	Changming Su	0789-0155P	2195
2292	7590	12/08/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			ZIMMER, MARC S	
PO BOX 747			ART UNIT	PAPER NUMBER
FALLS CHURCH, VA 22040-0747			1712	

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/719,235

Applicant(s)

SU ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-9 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,8,13,16-18 is/are rejected.
- 7) ☒ Claim(s) 2,7,9,11,12,14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The prior art rejections over *Reid* are hereby withdrawn in view of Applicant's amendments.

Because this case had been inherited from Examiner Richard, the present Examiner had not undertaken a search of his own during the last stage of rejection because the prior art of record seemed to continue to be valid as a foundation for rejection of at least some of the claims. Insofar as Applicant has overcome that prior art, the present Examiner carried out his own modified search of the prior art which yielded the reference cited *infra*. Also, the present Examiner conferred with another Examiner having far more expertise in the art of well drilling/treating composition because some of the elements mentioned in the dependent claims, e.g. oil layer protective agent, black organo-electropositive gel, etc., did not appear to have a prominent status in the prior art and were, in general, unfamiliar terms. The Examiner familiar with well drilling/treating compositions remarked that he too had not encountered these terms before and, therefore, a rejection under 35 U.S.C. 112 was possibly merited depending upon what the Specification had said about these materials. While Applicant's Specification and claims provide mention of favored permutations of some of these materials, they are never formally defined nor is the mode of action of the materials made clear hence there appears to be a scope of enablement problem.

Applicant is being apprised of this because the present Examiner felt it was necessary to explain why these issues had not been raised previously.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 6, 8, and 16 are rejected under 35 U.S.C. 112, first paragraph, because the scope of several terms cannot be ascertained from Applicant's disclosure. In particular, the Examiner cannot determine the full scope of a "colloid stabilizing agent", an "oil layer protective agent", and a "black organo-electropositive gel". As before, although there are examples of the a colloid-stabilizing agent offered, it is not clear what the source of the colloid is nor does Applicant's Specification delineate by what mechanism that these materials operate and, therefore, the skilled artisan would not be able to determine what alternatives might be employed in the same capacity.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. At issue is Applicant's characterization of the cationic polymer as one having a "low" molecular weight. The descriptive word "low" is imprecise and prone to numerous different reasonable interpretations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 13, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qu et al., U.S. Patent Application Publication No. 2003/0019627. Qu describes a fracturing fluid (paragraph 39 and 138+) comprising an aqueous medium, a water soluble salt that imparts formation stability, and surfactant thickener. According to the abstract the surfactants, which form micellar structures also limit the fluid loss. Relevant to the present discussion, the surfactants are one of four types including cationic surfactants. The salts are selected from the several types identified in paragraph 116 and include those of aluminum. In view of the relatively small number of combinations of surfactant type and salt type, it is the Examiner's position that a fracturing composition comprising a cationic surfactant and aluminum salt is at least obvious.

Regarding claim 13, it is the Examiner's position that the composition would inherently possess a positive zeta potential given that there are no components mentioned that would result in a lowering of the zeta potential.

As for claim 18, chloride salts of aluminum are obvious in view of the fact that most of the other salts mentioned are, likewise, chlorides.

Allowable Subject Matter

Claims 2, 7, 9, 11-12, and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Although at least some of the additives contemplated by the claims are fairly commonplace in the prior art, e.g. weighting agents, the reference actually discourages their use in the particular situations for which their invention is best suited. For instance, claims 19 and 20 state that weighting agents are not desirable nor are polysaccharides (paragraphs 8-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 1, 2006

A handwritten signature in black ink, appearing to read "Marc S. Zimmer".

MARC S. ZIMMER
PRIMARY EXAMINER